

Self-concordant goals breed goal-optimism and thus well-being

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Abstract

Self-concordant goals are goals which represent a people's enduring interests and self-defining values (Sheldon, 2002). People pursuing more self-concordant goals evidence higher subjective well-being, as shown in participants from both Western and non-Western cultures (Sheldon et al., 2004). In a different literature, attributional style research has found that tendencies to provide optimistic explanations of life events also predict well-being. We hypothesized that people pursuing self-concordant goals would make more optimistic attributions about goal-specific outcomes, and that this tendency would help explain the link between self-concordance and well-being. Structural equation and multiple group modelling of 253 American and 230 Russian university students found support for these hypotheses. Self-concordance primarily predicted optimism following positive outcomes (that they will recur), not following negative outcomes (that they will end), and also, the mediational pattern was slightly different in the Russian than in the American sample. The results suggest that when people choose life-goals that fit their interests and values, they derive resources including the ability to interpret positive goal-outcomes in an optimistic way. This helps to explain why pursuing such goals makes them happy.

Keywords Self-concordant goals · Optimistic attributions · Well-being · Optimism

According to the Self-Concordance Model of optimal goal-striving (SCM; Sheldon & Elliot, 1999; Sheldon, 2014), personal goal setting is a difficult skill. Should we pursue love, or money? A career as a scientist, or as an artist? A relationship with person X, or person Y? In this view life is a blank canvas, upon which we paint via our attempts to achieve the broad life goals that we select. But what if we choose goals that do not suit and express us, and/or do not allow our true potentials to be developed? Unfortunately, people can and do pursue unfulfilling goals for years or even decades, seemingly unaware of alternative avenues of striving which might fit them better. In contrast, selecting goals that directly express our deep interests, values, and potentials can yield a lifetime of benefits.

Early SCM research (Sheldon & Elliot, 1999; Sheldon & Kasser, 1998) operationalized goal self-concordance using

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Self-Determination Theory's relative autonomy continuum (Ryan & Connell, 1989; Sheldon, 2014), assuming that goals that fit well with underlying personality are characterized by feelings of internal motivation and an absence of pressure. This early research showed that people tend to devote more sustained effort towards self-concordant goals, presumably because the goals represent stable interests and growth trends within the personality (Sheldon & Elliot, 1998). In addition, actually attaining such goals better meets peoples' psychological needs, thus enabling them to derive boosted levels of happiness and well-being (Sheldon & Elliot, 1999).

More recent research with the SCM has shown a variety of other functional benefits that accrue when people manage to select self-concordant goals. We will list these below, for completeness' sake. Goal self-concordance has been found to predict higher feelings of goal self-efficacy, which in turn predicts longitudinal goal attainment (Downes, Kristof-Brown, Judge, & Darnold, 2017). Self-concordance predicts lower ambivalence concerning goals (Koletzko, Herrmann, & Brandstätter, 2015), which in turn predicts greater subjective well-being. Self-concordance also predicts higher levels of action planning, and also greater effort, accounting for self-concordance effects on goal progress (Gaudreau, Carraro, & Miranda, 2012; see also Blouin-Hudon, Gaudreau, & Gareau, 2016). Self-concordance also predicts task-oriented coping, which serves as an additional mediator to goal progress



(Gaudreau et al., 2012; see also Smith, Ntoumanis, Duda, & Vansteenkiste, 2011). Other research found that selfconcordance is associated with greater ease of pursuit, explaining self-concordance's link to goal progress even better than sustained effort (Werner, Milyavskaya, Foxen-Craft, & Koestner, 2016). Self-concordance also predicts less burnout in adolescent strivers (Vasalampi, Salmela-Aro, & Nurmi, 2009) and helps people to set more implementation intentions (Carraro & Gaudreau, 2011), enabling them to automatize the enactment of goal-relevant behaviors (see also Koestner, Otis, Powers, Pelletier, & Gagnon, 2008). People who join health clubs for self-concordant reasons engage in less social comparison with respect to other club members, increasing their likelihood of remaining active in the club over a long period (Bailis & Segall, 2004). Finally, self-concordance predicts less maladaptive excuse-making after failures and setbacks, helping participants to accept and learn from those setbacks (Thacher & Bailis, 2012).

Strikingly, none of the research to date has addressed optimism, and the question of whether self-concordance might promote optimism regarding one's goal pursuits, in addition to the other benefits listed above. The purpose of the current research was to test this idea. According to optimistic attributional style theory (Peterson & Seligman, 1984) and its extension (Abramson, Metalsky, & Alloy, 1989), optimistic styles manifest in two forms: first, a disposition to make stable and global attributions concerning positive events that occur, believing that such events will persist and generalize; and second, a disposition to make unstable and local attributions concerning negative events that occur, believing that such events are mere aberrations. Both of these dispositions contribute to a person's functioning, by minimizing the chances that temporary setbacks undermine the person's commitment and resolve, and by maximizing the chances that temporary victories reinforce and reaffirm the person's commitment. People higher in optimistic attributional style evidence higher subjective well-being, as shown in participants from both Western and non-Western cultures (Hu, Zhang, & Yang, 2015).

In this research we hypothesized that self-concordance would be associated with *goal-specific optimism*. Conceptually, self-concordant goal-strivers are pursuing goals that represent their enduring interests and values, rather than more transient or situationally-induced objectives. They feel that their motivations are deep-sourced and will last, regardless of the ups and downs of daily striving. Thus, they should feel optimism that momentary goal-setbacks are short-term and can be overcome, and also, that positive outcomes reflect longer-term trends and will continue. Another reason for our prediction is based on past research showing that self-concordance is associated with higher self-efficacy for goals (Downes et al., 2017) and also with higher effort intentions and greater planning devoted to goals (Gaudreau et al., 2012).

Those with these important motivational resources in place should thus feel greater optimism about outcomes.

To our knowledge no research has examined the linkage between goal self-concordance and optimistic thinking, with one exception: Ionescu (2017) reported that self-concordance was positively correlated with dispositional optimism (Scheier, Carver, & Bridges, 2001). In the current study we hoped to replicate and extend this line of research by developing a method for assessing optimism regarding one's specific goals, supplementing measures of trait optimistic attributional style.

We believe that this addition of a new construct might be important for two reasons. First, meta-analyses of trait attributional style measures as predictors of performance outcomes indicate a large variance of effect sizes across contexts and significant differences between the effects of attributions concerning positive and negative events (Gordeeva, Sheldon, & Sychev, 2020). Second, contextualized measures of personality and motivation tend to show higher criterion validity than generalized (trait) ones (Shaffer & Postlethwaite, 2012; Wang & Richarde, 1988). Based on this, we expected that attributions of success and failure concerning specific goals should be related to, yet distinct from trait attributional optimism for positive and negative events and should have stronger criterion validity against well-being measures. In addition, we expected that goal self-concordance should have incremental effects on goal-specific optimism over trait optimism. Based on this reasoning, we formulated three hypotheses.

Hypothesis 1 stated that self-concordance would be associated with optimism concerning the stability and globality of positive goal outcomes, and the instability and locality of negative goal outcomes, controlling for general optimistic attributional style. Self-concordance would also be associated with well-being, replicating past findings (Sheldon & Elliot, 1999). Hypothesis 2 said that goal-specific optimism would be associated with participant well-being, even after controlling for the effects of general attributional style upon well-being (Hu et al., 2015; Peterson, Villanova, & Raps, 1985). Finally, Hypothesis 3 said that goal-specific optimism would mediate the association between goal self-concordance and well-being. In this view, one reason that self-concordance promotes well-being is that it promotes a sense of optimism, resilience and hope in the pursuit of one's important life goals.

In this research we focused on career and vocational goals, because these are pressing concerns for young adults in college and because the consequences of choosing a non-concordant career can be quite long-lasting. We tested our models on two independent samples, one U.S. and one Russian, in order to evaluate the generalizability of the results. Russia is a non-western culture, and some studies have shown that Russian samples differ from western samples in well-being and motivation-relevant variables (Elliot, Chirkov,



Kim, & Sheldon, 2001; Sheldon et al., 2017b). Although the existing optimism and self-concordance literatures provide no clear basis for hypothesizing differences in the current case, we tested our models separately in the two samples to confirm this. We reasoned that if the same patterns are found in both samples, it would help establish the generalizability of findings to a non-western sample.

Method

Participants and Procedure

U.S. participants were 253 undergraduates in a psychology class at the University of Missouri ($M_{age} = 19.23$, SD = 1.31, 52.6% males) and Russian participants were 230 graduate students from a technical university located in Moscow ($M_{age} = 22.63$, SD = 1.57, 68.6% males), who received course credit for participating. The surveys were administered online, and the research was described as a study of career goals and plans.

Measures

Goal Self-Concordance Measure Participants listed three life goals related to their career plans, one concerning professional development, another financial success, and the third openended. To assess the self-concordance of these goals, we asked participants to rate four reasons for pursuing each goal: external ("because I have to"), introjected "(because I ought to"), identified ("because it is important to me"), and intrinsic ("because it is enjoyable"). These reasons sample a continuum of perceived locus of causality for behavior (Ryan & Connell, 1989; Sheldon, Osin, Gordeeva, Suchkov, & Sychev, 2017a), ranging from non-internalized to completely internalized. As in typical practice (Sheldon, 2014; Sheldon & Elliot, 1999), a "goal self-concordance" variable was formed by summing the identified and intrinsic scores and subtracting the introjected and external scores (Sheldon, Prentice, & Osin, 2019). This score indexes the extent goals are pursued for internal and presumably enduring reasons, rather than for reasons of external or internal pressure.

Trait Optimistic Attributional Styles To measure attributional style as a stable trait and possible predictor of goal-specific optimism, we used a modified version of the Attributional Style Questionnaire (ASQ, Peterson et al., 1982) for University students (Gordeeva et al., 2020), with 12 achievement situations (5 positive and 7 negative) and two parameters of attributional style – stability and globality. An example negative scenario was: "You have been looking for a job unsuccessfully for some time." Participants were instructed to imagine that each situation actually happened to them, to write

down its most likely cause, and rate this cause using a 6-point Likert-type scale on two main dimensions of attributional style, stability (this cause... will never again be present – will always be present) and globality (influences just this particular situation – influences all situations in my life). An optimistic attributional style for explaining positive events (called "positive trait optimism") score was computed by summing the stability and globality ratings for positive situations, and a "negative trait optimism" score was computed by first reversing the ratings of the negative situations, then summing the two kinds of ratings.

Goal Optimistic Attributional Style A newly developed measure based on the ASQ assessed participants' levels of optimistic thinking regarding imagined successes and failures in their three long-term goals. Participants first listed a main reason why they might succeed in attaining the goal, and also listed a reason why they might fail to achieve it. Then they rated these two reasons using a 6-point Likert-type scale on stability (the reason... will never again be present – will always be present) and globality (influences just this particular situation – influences all situations in my life). Two summary variables were computed in the same way as above, called "positive goal optimism" (positive events will be stable with wide-ranging effects) and "negative goal optimism" (negative events will be temporary with limited effects).

Well-Being To measure well-being we used the Mental Health Continuum-Short Form (MHC-SF) (Keyes et al., 2008; Żemojtel-Piotrowska et al., 2018). It measures positive mental health and is comprised of 14 items describing experiences of well-being whose frequency during the past month the respondents are asked to rate on a 6-point Likert scale (never – every day), representing emotional well-being ("happy"), psychological well-being ("you had experiences that challenged you to grow and become a better person"), and social well-being ("the way our society works made sense to you").

All measures, except MHC-SF, were translated from English into Russian by two professional psychologists fluent in both English and Russian and then back-translated. Reliability coefficients of all scales are presented in Tables 1 and 2.

Data Analysis Strategy To test our hypotheses, we applied structural equation modeling with Mplus 7.4 (Muthén & Muthén, 2015) using the robust maximum likelihood (MLR) estimator and scaled chi-square difference tests (Satorra & Bentler, 2010) to compare nested models. We obtained the confidence intervals for the indirect effects using the bootstrap method with 10,000 resamples (Preacher & Hayes, 2008). To obtain more accurate estimates of indirect effects, we tested partial mediation models followed by Wald test to test the possibility of full mediation (Muthén & Muthén, 2015). To



Table 1 Descriptive statistics and correlations among the study measures in the U.S. sample (N = 253)

	1	2	3	4	5	6	
1. Goal self-concordance	_			,			
2. Positive trait optimism	.13*	_					
3. Negative trait optimism	.20**	19**	_				
4. Positive goal optimism	.18**	.55***	04	_			
5. Negative goal optimism	.11	13*	.43***	27***	_		
6. Well-being (MHC-SF)	.20**	.22***	.19**	.22***	.04	_	
Mean	4.02	4.60	3.34	5.09	2.73	3.78	
SD	2.45	.66	.75	.74	1.03	.63	
Cronbach's α	.77	.72	.78	.76	.80	.90	

Note. *p < .05. **p < .01. ***p < .001

obtain more insight into the sizes of indirect effects, we calculated P_M , the ratio of the indirect effect to the total effect, bearing in mind that it should be treated cautiously in samples below N = 500 (Preacher & Kelley, 2011).

Results

U.S. Sample

Table 1 presents descriptive statistics and correlations among the study measures in the US sample. Goal self-concordance was positively correlated with both trait attributional style measures, replicating the finding of Ionescu (2017). Goal self-concordance was also positively correlated with participants' style of explaining positive goal events, consistent with Hypothesis 1. However, goal self-concordance was uncorrelated with style of explaining negative goal events. The latter patterns persisted after controlling for the two trait attributional style variables, with the positive goal optimism partial correlation remaining significant (r = .13, p = .044) and the negative goal optimism correlation remaining non-significant (r = .03, p = .631). Goal self-concordance, the two trait optimism measures, and positive goal optimism were all

positively correlated with well-being, whereas negative goal optimism was uncorrelated with well-being.

Next, we tested our three hypotheses in a single structural equation model. First, we tested a measurement model, where the well-being, self-concordance, and the two goal optimism latent factors, as well as the two trait optimism variables, were freely correlated. Next, we tested a more constrained structural model, where well-being was regressed on the factors of self-concordance and the two goal optimism variables. In this analysis the two trait optimism variables were included as control variables predicting their respective goal-attribution variable. In line with the possibility of partial mediation, we included direct paths from goal self-concordance to positive and negative goal optimism in the model.

The measurement model showed acceptable fit to the data: $\chi^2=89.34;\ df=41;\ p<0.001;\ CFI=0.943;\ TLI=0.908;\ SRMR=0.047;\ RMSEA=0.068,\ 90\%\ CI\ [0.049,\ 0.088]).$ The fit of the structural model (see Fig. 1) was equally acceptable $\chi^2=95.18;\ df=45;\ p<0.001;\ CFI=0.941;\ TLI=0.914;\ SRMR=0.050;\ RMSEA=0.066,\ 90\%\ CI\ [0.048,\ 0.085]).$ The fit of the structural model did not differ significantly from that of the measurement model based on the scaled chi-square difference test $(\Delta\chi^2=5.90;\ \Delta df=4;\ p=0.207).$

Table 2 Descriptive statistics and correlations among the study measures in Russian sample (N = 230)

	1	2	3	4	5	6
1. Goal self-concordance	_					
2. Positive trait optimism	.32***	_				
3. Negative trait optimism	.21**	10	_			
4. Positive goal optimism	.43***	.54***	.10	_		
5. Negative goal optimism	.23***	07	.55***	07	_	
6. Well-being (MHC-SF)	.31***	.36***	.25***	.33***	.28***	_
Mean	4.03	4.30	3.87	4.75	3.55	3.32
SD	2.58	.97	.98	1.06	1.36	0.81
Cronbach's α	.78	.82	.83	.83	.88	.91

Note. *p < .05. **p < .01. ***p < .001



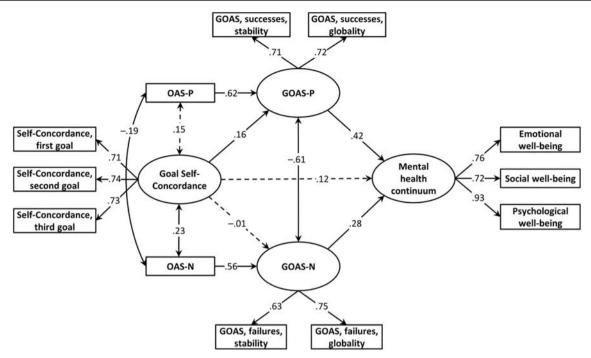


Fig. 1 Parameters of the SEM model in the U.S. sample. *Note*. All the coefficients are standardized; a dashed line indicates a non-significant path. Note. OAS -P = Optimistic Attributional Styles for positive events.

OAS-N = Optimistic Attributional Styles for negative events. GOAS-P = Goal Optimistic Attributional Styles for positive events. GOAS-N = Goal Optimistic Attributional Styles for negative events

The standardized indirect effect of goal self-concordance on well-being via positive goal optimism was weak, but marginally significant (ab_{cs} = .069, 95% CI [.003, .155]), whereas the standardized indirect effect via negative goal optimism was non-significant (ab_{cs} = -.003, 95% CI [-.066, .056]). The mediation ratio suggested that positive goal optimism mediated approximately one third of the total effect of goal self-concordance on well-being (P_M = 0.36). However, the direct effect was non-significant (β = .124, 95% CI [-.065, .302], p = 0.177). Constraining to zero the non-significant paths from goal self-concordance to well-being and to negative goal optimism did not affect the model, according to the Wald test (χ^2 (2) = 1.88, p = .391), suggesting full mediation by positive goal optimism.

Russian Sample

Descriptive statistics and correlations for the Russian sample are presented in Table 2. Goal self-concordance was again significantly correlated with both trait attributional style measures, again replicating Ionescu (2017). It was also positively correlated with both goal optimism variables. The basic patterns persisted after removing the effects of the trait attributional style variables, with the goal self-concordance to positive goal optimism partial correlation remaining larger than the goal self-concordance to negative goal optimism partial correlation (r=.33, p<.001, versus r=0.15, p=0.033). Goal self-

concordance and all four of the optimism variables were positively correlated with well-being. Thus, in the Russian sample, negative goal optimism, the belief that goal setbacks will not persist, was positively associated with well-being, unlike in the U.S. sample.

We again formally tested our three hypotheses in a single structural equation model. The measurement model fit the data well (χ^2 = 49.93; df = 41; p = 0.160; CFI = 0.988; TLI = 0.981; SRMR = 0.034; RMSEA = 0.031, 90% CI [0.000, 0.057])) The structural model (see Fig. 2) also yielded a good fit to the data: χ^2 = 59.16; df = 45; p = 0.077; CFI = 0.981; TLI = 0.973; SRMR = 0.039; RMSEA = 0.037, 90% CI [0.000, 0.061]). Although the difference from measurement model was marginally significant ($\Delta\chi^2$ = 9.58, Δ df = 4, p = 0.048), we opted to keep this model based on its non-significant chi-square test of absolute fit.

Again, the standardized indirect effect of goal self-concordance on well-being via positive goal optimism was statistically significant (ab_{cs} = .159, 95% CI [.024, .357]), whereas the indirect effect of goal self-concordance on well-being via negative goal optimism was not (ab_{cs} = .051, 95% CI [-.006, .127]). The mediation ratio suggested that positive goal optimism mediated approximately one half of the total effect of goal self-concordance on well-being (P_M =0.59). The direct effect of goal self-concordance on well-being was non-significant (β = .061, 95% CI [-.282, .342], p = 0.688) and the Wald test (χ^2 (2) = 3.52, p = .172) again supported full mediation.



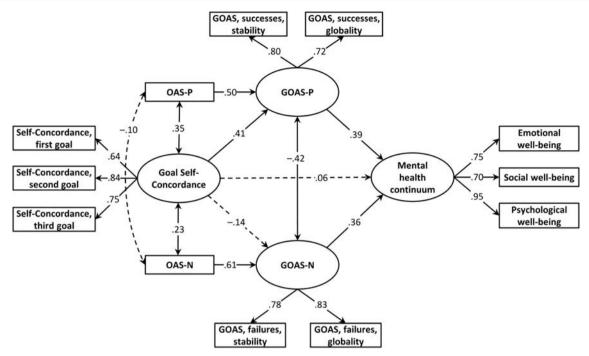


Fig. 2 Parameters of the SEM model in the Russian sample. *Note.* All the coefficients are standardized; a dashed line indicates a nonsignificant path. Note. OAS -P = Optimistic Attributional Styles for positive

events. OAS-N = Optimistic Attributional Styles for negative events. GOAS-P = Goal Optimistic Attributional Styles for positive events. GOAS-N = Goal Optimistic Attributional Styles for negative events.

Multiple Groups Analysis

To test the equivalence of this model across the two samples we implemented multiple-group analysis (Byrne, 2012). The results of testing the invariance of SEM models in two samples indicated good fit of the configural invariance model (#1) without any constraints (see Table 3). The measurement model (#2) with all non-standardized factor loadings fixed equal between groups also showed good fit not significantly different from the configural model (p = 0.681). The structural model (#3) with all non-standardized factor loadings, covariances and paths fixed equal showed acceptable fit but the difference between the structural model and the configural model was marginally significant (p = 0.053). Once we freed the path

between goal self-concordance and positive goal optimism, the resulting structural model (#4) showed excellent fit with no significant difference from the configural model (p = 0.362, see Table 3). Therefore, the last model may be considered as common for these two samples, with a difference in the size of one of the paths. The model shows that goal self-concordance was significantly associated with positive goal optimism but not with negative goal-optimism (see Fig. 3). As expected, the goal optimism variables were both associated with well-being.

We tested the mediation hypothesis in the final model by allowing the path from goal self-concordance to positive goal optimism to be freed across the two samples. The standardized indirect effect of goal self-concordance on well-being via

 Table 3
 The results of the multiple-group analysis

Model type and number	χ^2	df	CFI	RMSEA	SRMR	SCF	Comparison	$\Delta \chi^2$	Δdf	<i>p</i> -level
1. Configural Model (No constraints)	152.72	90	0.960	0.054	0.045	1.005	_	_	_	_
2. Measurement Model (All factor loadings fixed invariant)		96	0.962	0.051	0.049	1.007	2 versus 1	3.97	6	0.681
3. <i>Structural Model</i> (All factor loadings, covariances and regression paths fixed invariant)	179.74	107	0.954	0.053	0.079	1.046	3 versus 1	27.34	17	0.053
4. <i>Structural Model</i> (All factor loadings invariant; covariances and regression paths invariant, except one path from self-concordance to positive goal optimism)		106	0.961	0.049	0.065	1.050	4 versus 1	17.38	16	0.362

Note. CFI = comparative fit index; RMSEA = root mean square error of approximation; SRMR = standardized root mean square residual, SCF = Scaling Correction Factor



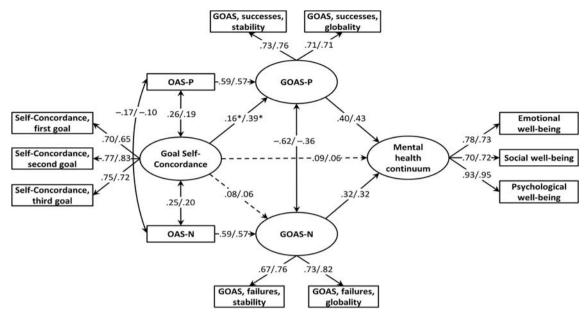


Fig. 3 Parameters of the SEM model for multiple-group data, *Note*. The parameter estimates are given for the multiple-group model for US and Russian samples (in this order). All the coefficients are standardized; a dashed line indicates a non-significant path. * = these parameters were

allowed to differ. Note. OAS -P = Optimistic Attributional Styles for positive events. OAS-N = Optimistic Attributional Styles for negative events. $GOAS-P = Goal\ Optimistic\ Attributional\ Styles\ for\ positive\ events.$ $GOAS-N = Goal\ Optimistic\ Attributional\ Styles\ for\ negative\ events.$

positive goal optimism the Russian sample was moderate and statistically significant ($ab_{cs}=0.171,\ 95\%\ CI\ [.091,\ .266];$ $P_M=0.68;\ p<0.001$). In the U.S. sample this effect was weaker, but still significant ($ab_{cs}=0.064,\ 95\%\ CI\ [.003,\ .139];\ P_M=0.36$). The indirect effect of goal self-concordance on well-being via negative goal optimism was non-significant in both samples ($ab_{cs}=0.018,\ 95\%\ CI\ [-.015,\ .057]$ in the Russian sample; $ab_{cs}=0.025,\ 95\%\ CI\ [-.020,\ .075]$ in the US sample). The model with the effects of goal self-concordance on well-being and negative goal optimism constrained to zero was supported by Wald test ($\chi^2(2)=3.06,\ p=.216$), indicating that the association of goal self-concordance and well-being is fully mediated by goal optimism. The indirect effect is weak to moderate, stronger in Russian students.

Discussion

This study combined self-concordance theory and attributional style theory in a new way. Specifically, we have shown that when people manage to select goals that better represent their values and interests, rather than feeling forced or pressured, they are imbued with a sense of optimism concerning the future. This is a new functional benefit of self-concordant goal striving, going beyond past research showing that self-concordance is associated with benefits such as greater goal-efficacy, greater planning and implementation intentions, greater ease, more flow and coping, and reduced excuse-

making (Carraro & Gaudreau, 2011; Downes et al., 2017; Gaudreau et al., 2012; Thacher & Bailis, 2012; Werner et al., 2016).

Interestingly, our study has also shown that selfconcordance boosts optimism concerning positive goal outcomes in particular; when things go well, self-concordant individuals expect them to continue and to ramify to further domains. In contrast, goal self-concordance was unrelated to optimism that negative goal-events would be short-lived. Although we did not predict this asymmetry, it may explainable. Again, self-concordant goal-strivers are pursuing goals that they feel represent who they really are - meaningful goals that will provide stable and enduring motivation. Given this it is logical for them to expect initial success to lead to further success, and to feel that newly emerging positive trends will only increase over time. Why didn't this pattern extend to optimism regarding negative events? We can speculate that negative events are typically unexpected, coming from environmental and situational factors that may be hard to predict and that are objectively less controllable. Perhaps selfconcordant goal-strivers recognize that they cannot control negative events as well as they can positive events. This speculation requires further testing.

Furthermore, our study has shown that optimistic thinking about goals helps explain the well-known association between self-concordance and well-being (Koletzko et al., 2015; Sheldon & Elliot, 1999). This extends previous findings in this area of research and suggests that one reason that self-concordant people are happier is that they expect their



intentional lives to go well. They are optimistic about the goals that they are pursuing, and expect continuing positive outcomes from this pursuit, which helps boost their wellbeing.

Although the link between trait optimism and well-being has been established (Ho, Cheung, & Cheung, 2010), no previous study has examined goal-optimism, which is a new and much more specific construct. Our study shows that the effects of goal-specific optimism are not just reducible to the effects of trait or dispositional optimism. Although corresponding trait- and goal-specific optimism variables were positively correlated, this connection did not explain the effect of goal-specific optimism on well-being, suggesting that general and specific optimism have independent effects that are important to consider separately. Finally, our study generalized the pattern to students within two different cultural settings, namely, the United States and Russia.

One interesting finding of our study was the slightly different results in the U.S. and Russia. As seen in Figs. 1 and 2, the link between self-concordance positive goal optimism was significantly stronger in Russia, which also strengthened the mediation from self-concordance to well-being via positive goal optimism. Perhaps within the Russian cultural context, firmly identifying with one's career goals is especially important for taking full advantage of goal-relevant successes and opportunities. Overall, goal self-concordance appeared to be more impactful in Russia than in the U.S., perhaps reflecting the greater uncertainties of trying to pursue career-goals within the Russian economic system and the greater importance of having a steady inner compass. However, participants in the two samples also differ in other ways, such as major (psychology vs. technology) and, most importantly, career stage (undergraduates vs. graduate students). It is possible that at more advanced career stages professional and financial goals become more salient, which could explain the stronger associations of goal parameters with well-being. Past successes at attaining career-related goals (e.g., progression to a graduate program) could also influence the way professional goals are perceived.

Of course, our study also has important limitations, foremost among them the cross-sectional design which precludes firm causal interpretations of the associations. For example, it could be that happy people think more optimistically about goals, which in turn helps them to select more self-concordant goals – the opposite causal sequence. Longitudinal or experimental research will be required to better support our proposed causal process model. Comparative studies using more diverse sample could help to separate the effects of culture, career stage, and major.

In conclusion: These findings provide first evidence to document a new kind of benefit from choosing life-goals that are self-concordant (i.e. that are enjoyable, challenging and meaningful). Findings from both cultural samples suggest that selfconcordant goals help people feel more optimistic about the future, especially when positive goal-events happen, leading to higher well-being.

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Compliance with Ethical Standards

Conflict of Interests Statement The authors have no conflicts of interest.

Ethical Approval Statement The studies have been approved by Institutional Review Board of University of Missouri (FWA Number 00002876, IRB Registration Numbers: 00000731, 00009014). IRB Project Number 2011114, IRB Review Number 259122.

References

- Abramson, L. Y., Metalsky, G. I., & Alloy, L. B. (1989). Hopelessness depression: A theory-based subtype of depression. *Psychological Review*, 96, 358–372. https://doi.org/10.1037/0033-295X.96.2.358.
- Bailis, D. S., & Segall, A. (2004). Self-determination and social comparison in a health promotion setting. *Basic and Applied Social Psychology*, 26, 25–33.
- Blouin-Hudon, E. M., Gaudreau, P., & Gareau, A. (2016). Coping as a building mechanism to explain the unique association of affect and goal motivation with changes in affective states. *Anxiety, Stress, and Coping*, 29(5), 519–532. https://doi.org/10.1080/10615806.2015. 1100298.
- Byrne, B. M. (2012). Structural equation modeling with Mplus: Basic concepts, applications, and programming. New York: Routledge.
- Carraro, N., & Gaudreau, P. (2011). Implementation planning as a pathway between goal motivation and goal Progress for academic and physical activity goals. *Journal of Applied Social Psychology*, 41(8), 1835–1856. https://doi.org/10.1111/j.1559-1816.2011.00795.x.
- Downes, P. E., Kristof-Brown, A. L., Judge, T. A., & Darnold, T. C. (2017). Motivational mechanisms of self-concordance theory: Goal-specific efficacy and person-organization fit. *Journal of Business and Psychology*, 32(2), 197–215.
- Elliot, A. J., Chirkov, V. I., Kim, Y., & Sheldon, K. M. (2001). A cross-cultural analysis of avoidance (relative to approach) personal goals. *Psychological Science*, 12(6), 505–510. https://doi.org/10.1111/1467-9280.00393.
- Gaudreau, P., Carraro, N., & Miranda, D. (2012). From goal motivation to goal progress: The mediating role of coping in the selfconcordance model. *Anxiety, Stress & Coping.*, 25(5), 507–528. https://doi.org/10.1080/10615806.2011.628015.
- Gordeeva, T. O., Sheldon, K. M., & Sychev, O. A. (2020). Linking academic performance to optimistic attributional style: Attributions following positive events matter most. *European Journal of Psychology of Education*, 35(1), 21–48. https://doi.org/10.1007/ s10212-019-00414-y.
- Ho, M. Y., Cheung, F. M., & Cheung, S. F. (2010). The role of meaning in life and optimism in promoting well-being. *Personality and Individual Differences*, 48(5), 658–663.
- Hu, T., Zhang, D., & Yang, Z. (2015). The relationship between attributional style for negative outcomes and depression: A meta-analysis. *Journal of Social and Clinical Psychology.*, 34(4), 304–321. https://doi.org/10.1521/jscp.2015.34.4.304.
- Ionescu, D. (2017). The process of life goals' pursuit and the satisfaction of basic psychological needs: the predictive role of personality



- factors. Romanian Journal of Applied Psychology, 19(1), 23–29. https://doi.org/10.24913/rjap.19.1.04.
- Keyes, C. L. M., Wissing, C., Potgieter, J. P., Temane, M., Kruger, A., & van Rooy, S. (2008). Evaluation of the mental health continuum short form (MHC-SF) in Setswana speaking in south Africans. Clinical Psychology and Psychotherapy, 15, 181–192.
- Koestner, R., Otis, N., Powers, T. A., Pelletier, L., & Gagnon, H. (2008). Autonomous motivation, controlled motivation, and goal progress. *Journal of Personality*, 76, 1201–1229. https://doi.org/10.1111/j. 1467-6494.2008.00519.x.
- Koletzko, S. H., Herrmann, M., & Brandstätter, V. (2015). Unconflicted goal striving: Goal ambivalence as a mediator between goal selfconcordance and well-being. *Personality and Social Psychology Bulletin.*, 41(1), 140–156. https://doi.org/10.1177/ 0146167214559711.
- Muthén, L. K., & Muthén, B. O. (2015). *Mplus user's guide* (7th edn.). Los Angeles: Muthén & Muthén.
- Peterson, C., & Seligman, M. E. (1984). Causal explanations as a risk factor for depression: Theory and evidence. *Psychological Review*, *91*(3), 347–374. https://doi.org/10.1037/0033-295X.91.3.347.
- Peterson, C., Semmel, A., von Bayer, C., Abramson, L., Metalsky, G., & Seligman, M. E. P. (1982). The Attributional style questionnaire. Cognitive Therapy and Research, 6(3), 287–300. https://doi.org/ 10.1007/BF01173577.
- Peterson, C., Villanova, P., & Raps, C. S. (1985). Depression and attributions: Factors responsible for inconsistent results in the published literature. *Journal of Abnormal Psychology*, 94, 165–168. https://doi.org/10.1037/0021-843X.94.2.165.
- Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods*, 40(3), 879–891. https://doi.org/10.3758/BRM.40.3.879.
- Preacher, K. J., & Kelley, K. (2011). Effect size for mediation models: Quantitative strategies for communicating indirect effects. *Psychological Methods*, 16(2), 93–115.
- Ryan, R. M., & Connell, J. P. (1989). Perceived locus of causality and internalization: Examining reasons for acting in two domains. *Journal of Personality and Social Psychology*, 57, 749–761.
- Satorra, A., & Bentler, P. M. (2010). Ensuring positiveness of the scaled difference chi-square test statistic. *Psychometrika*, 75, 243–248. https://doi.org/10.1007/s11336-009-9135-y.
- Scheier, M. F., Carver, C. S., & Bridges, M. W. (2001). Optimism, pessimism, and psychological well-being. In E. C. Chang (Ed.), Optimism & pessimism: Implications for theory, research, and practice (pp. 189–216). Washington, DC, US: American Psychological Association. https://doi.org/10.1037/10385-009.
- Shaffer, J. A., & Postlethwaite, B. E. (2012). A matter of context: A metaanalytic investigation of the relative validity of contextualized and noncontextualized personality measures. *Personnel Psychology*, 65(3), 445–494.
- Sheldon, K. M. (2002). The self-concordance model of healthy goal striving: When personal goals correctly represent the person. In E. L. Deci & R. M. Ryan (Eds.), *Handbook of self-determination* research (pp. 65–86). Rochester, NY, US: University of Rochester Press.
- Sheldon, K. M. (2014). Becoming oneself: The central role of selfconcordant goal selection. *Personality and Social Psychology Review*, 18, 349–365.
- Sheldon, K. M., & Elliot, A. J. (1998). Not all personal goals are "personal": Comparing autonomous and controlling goals on effort and attainment. *Personality and Social Psychology Bulletin*, 24, 546–557.

- Sheldon, K. M., & Elliot, A. J. (1999). Goal striving, need satisfaction, and longitudinal well-being: The self-concordance model. *Journal* of Personality and Social Psychology, 76, 546–557.
- Sheldon, K. M., & Kasser, T. (1998). Pursuing personal goals: Skills enable progress but not all progress is beneficial. *Personality and Social Psychology Bulletin*, 24, 1319–1331.
- Sheldon, K. M., Elliot, A. J., Ryan, R. M., Chirkov, V. I., Kim, Y., Wu, C., Demir, M., & Sun, Z. (2004). Self-concordance and subjective well-being in four cultures. *Journal of Cross-Cultural Psychology*, 35, 209–223.
- Sheldon, K. M., Osin, E. N., Gordeeva, T. O., Suchkov, D. D., & Sychev, O. A. (2017a). Evaluating the dimensionality of self-determination Theory's relative autonomy continuum. *Personality and Social Psychology Bulletin*, 43(9), 1215–1238. https://doi.org/10.1177/0146167217711915.
- Sheldon, K. M., Titova, L., Gordeeva, T. O., Osin, E. N., Lyubomirsky, S., & Bogomaz, S. (2017b). Russians inhibit the expression of happiness to strangers: Testing a display rule model. *Journal of Cross-Cultural Psychology*, 48(5), 718–733.
- Sheldon, K. M., Prentice, M., & Osin, E. (2019). Rightly crossing the Rubicon: Evaluating goal self-concordance prior to selection helps people choose more intrinsic goals. *Journal of Research in Personality*, 79, 119–129. https://doi.org/10.1016/j.jrp.2019.03. 001.
- Smith, A. L., Ntoumanis, N., Duda, J. L., & Vansteenkiste, M. (2011). Goal striving, coping, and well-being: a prospective investigation of the self-concordance model in sport. J. Sport Exercise Psychology, 33(1), 124–145.
- Thacher, T. M., & Bailis, D. S. (2012). Selective defensiveness or nondefensiveness: How does relative autonomy relate to excusemaking when goal pursuits do not succeed? *Motivation and Emotion*, 36(3), 323.
- Vasalampi, K., Salmela-Aro, K., & Nurmi, J.-E. (2009). Adolescents' self-concordance, school engagement, and burnout predict their educational trajectories. *European Psychologist*, 14(4), 332–341. https://doi.org/10.1027/1016-9040.14.4.332.
- Wang, A. Y., & Richarde, R. S. (1988). Global versus task-specific measures of self-efficacy. *The Psychological Record*, 38(4), 533–541.
- Werner, K. M., Milyavskaya, M., Foxen-Craft, E., & Koestner, R. (2016). Some goals just feel easier: Self-concordance leads to goal progress through subjective ease, not effort. *Personality and Individual Differences*, 96, 237–242.
- Żemojtel-Piotrowska, M., Piotrowski, J. P., Osin, E. N., Cieciuch, J., Adams, B. G., Ardi, R., Bălţātescu, S., Bogomaz, S., Bhomi, A. L., Clinton, A., de Clunie, G. T., Czarna, A. Z., Esteves, C., Gouveia, V., Halik, M. H. J., Hosseini, A., Khachatryan, N., Kamble, S. V., Kawula, A., Lun, V. M. C., Ilisko, D., Klicperova-Baker, M., Liik, K., Letovancova, E., Cerrato, S. M., Michalowski, J., Malysheva, N., Marganski, A., Nikolic, M., Park, J., Paspalanova, E., de Leon, P. P., Pék, G., Różycka-Tran, J., Samekin, A., Shahbaz, W., Khanh Ha, T. T., Tiliouine, H., van Hiel, A., Vauclair, M., Wills-Herrera, E., Włodarczyk, A., Yahiiaev, I., & Maltby, J. (2018). The mental health continuum-short form: The structure and application for cross-cultural studiesa 38 nation study. *Journal of Clinical Psychology, 74*(6), 1034–1052. https://doi.org/10.1002/jclp.22570.

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